UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,753	08/28/2001	Allan Bolding	112025-0430	5800

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EXAMINER
REILLY, SEAN M

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/940,753	BOLDING ET AL.
	Examiner	Art Unit	
	Sean Reilly	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This office action is a first action on the merits of this application. Claims 1-19 are

presented for further examination.

Applicant is advised that should claim 4 be found allowable, claim 5 will be objected to

under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application

are duplicates or else are so close in content that they both cover the same thing, despite a slight

difference in wording, it is proper after allowing one claim to object to the other as being a

substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

1.   Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the

invention. The statement "from one or messages whose contents are organized," is ambiguous.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-3, 6-7, and 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by

Parnafes et al. (U.S. Patent Number 6,721,272, hereinafter "Parnafes").

In considering claim 1, Parnafes discloses an intermediate network device for use within

a computer network having a server configured to provide one or more data streams to a client,

each stream having a corresponding bandwidth, the network device comprising:

- means for determining network traffic characteristics sufficient to identify a stream

     from the server to the client (Col 4, line 26);

- means for determining the bandwidth of the stream (Col 5, line 67); and

- a resource reservation protocol (RSVP) transmitter proxy (Col 5, line 8) configured

     to reserve resources within the computer network on behalf of the server for

     allocation to the stream (Col 6, lines 6-7).

In considering claim 2, Parnafes discloses the intermediate network device of claim 1

wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path

messages on behalf of the server, the one or more RSVP Path messages containing the network

traffic characteristics and the bandwidth of the stream (Col 7, lines 57-61).

In considering claim 3, Parnafes discloses the intermediate network device of claim 2

wherein the RSVP transmitter proxy is configured to terminate RSVP Reservation (Resv)

messages that are sent to the Server (Col 7, line 64 - Col 8, line 2).

In considering claim 6, Parnafes discloses the intermediate network device of claim 1

wherein the means for determining the network traffic characteristics is a packet classification

engine that is configured to snoop on messages exchanged between the server and the client (Col 4, lines 25-30).

In considering claim 7, Parnafes discloses the intermediate network device of claim 6 wherein the means for determining the stream's bandwidth is the packet classification engine (Col 5, line 67).

In considering claims 12-14, Parnafes explicitly states the RSVP proxy disclosed implements the Resource Reservation Protocol (RSVP) (Col 3, lines 49-50). The Resource Reservation Protocol (RSVP) is set forth in Internet Engineering Task Force Request for Comment 2205, Version 1 published September 1997.

In considering claim 12, Parnafes discloses the intermediate network device of claim 2 wherein

Parnafes discloses the intermediate network device of claim 2 wherein

❑   the client has a network layer address and a transport layer port for use in receiving the stream from the server (Col 1, lines 34-36; "TCP/IP"),

❑   the server has a network layer address and a transport layer port for use in sending the stream to the client (Col 1, lines 34-36; "TCP/IP"), and

❑   the network traffic characteristics include the client's network layer address and transport layer port and the server's network layer address and transport layer port (Col 7, line 57). [Such characteristics must be determined in order to generate the RSVP Path message. Refer to RFC 2205 for further details outlining the contents of a Path message.]

In considering claim 13, Parnafes discloses the intermediate network device of claim 12 wherein the stream uses a given transport layer protocol, and the network traffic characteristics include the given transport layer protocol (Col 7, line 57; included in a Path message).

In considering claim 14, Parnafes discloses the intermediate network device of claim 13 wherein the RSVP Path messages generated and sent by the RSVP transmitter proxy on behalf of the server include a session object containing the client's network layer address and transport layer port and the transport layer protocol associated with the stream (Col 7, line 57; included in a Path message).

In considering claim 15, Parnafes discloses the intermediate network device of claim 14 wherein the RSVP Path message includes a sender template object containing the server's network layer address and transport layer port associated with the stream (Col 7, line 57; included in a Path message).

In considering claim 16, Parnafes discloses the intermediate network device of claim 15 wherein the RSVP Path message includes a sender Tspec object containing the bandwidth of the stream (Col 7, line 57; included in a Path message).

3. Claims 1-3, 6-7, and 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al. (U.S. Patent Number 6,765,927, hereinafter "Martin").

In considering claim 1, Martin discloses an intermediate network device for use within a computer network having a server configured to provide one or more data streams to a client, each stream having a corresponding bandwidth, the network device comprising:

❑   means for determining network traffic characteristics sufficient to identify a stream

from the server to the client (Col 3, lines 21-24);

❑   means for determining the bandwidth of the stream (Col 3, lines 23-26); [The

bandwidth must be detected in order to properly generate the path message (Tspec).]

and

❑   a resource reservation protocol (RSVP) transmitter proxy (Col 3, line12) configured

to reserve resources within the computer network on behalf of the server for

allocation to the stream (Col 2, line 62 "flow characteristics" and Col 3, lines 23-27).

In considering claim 2, Martin discloses the intermediate network device of claim 1

wherein the RSVP transmitter proxy is configured to generate and send one or more RSVP Path

messages on behalf of the server, the one or more RSVP Path messages containing the network

traffic characteristics and the bandwidth of the stream (Col 3, lines 23-27).

In considering claim 3, Martin discloses the intermediate network device of claim 2

wherein the RSVP transmitter proxy is configured to terminate RSVP Reservation (Resv)

messages that are sent to the Server (Col 3, lines 42-46). [Figure 1 also shows a clear illustration

of where the Resv messages travel, from the client (Component 120) to termination at the proxy

server (Component 140).]

In considering claim 6, Martin discloses the intermediate network device of claim 1

wherein the means for determining the network traffic characteristics is a packet classification

engine that is configured to snoop on messages exchanged between the server and the client (Col

3, lines 21-24). [A packet classification engine is inherent in Martin's system. The RSVP

component 246 in Figure 2 detects when a Path message should be sent based on an incoming

packet and then further determines the network characteristics for generating an appropriate Path message. The network characteristics determined for a Path message includes the stream bandwidth as stated above.]

In considering claim 7, Martin discloses the intermediate network device of claim 6 wherein the means for determining the stream's bandwidth is the packet classification engine (Col 3, lines 21-24).

In considering claim 12, Martin discloses the intermediate network device of claim 2 wherein

- ❏ the client has a network layer address and a transport layer port for use in receiving the stream from the server (Col 4, line 59-61; included in a Path message),

- ❏ the server has a network layer address and a transport layer port for use in sending the stream to the client (Col 4, line 59-61), and

- ❏ the network traffic characteristics include the client's network layer address and transport layer port and the server's network layer address and transport layer port (Col 4, line 59-61).

In considering claim 13, Martin discloses the intermediate network device of claim 12 wherein the stream uses a given transport layer protocol, and the network traffic characteristics include the given transport layer protocol (Col 4, line 59-61).

In considering claim 14, Martin discloses the intermediate network device of claim 13 wherein the RSVP Path messages generated and sent by the RSVP transmitter proxy on behalf of the server include a session object containing the client's network layer address and transport layer port and the transport layer protocol associated with the stream (Col 4, line 59-61).

In considering claim 15, Martin discloses the intermediate network device of claim 14 wherein the RSVP Path message includes a sender template object containing the server's network layer address and transport layer port associated with the stream (Col 4, line 59-61).

In considering claim 16, Martin discloses the intermediate network device of claim 15 wherein the RSVP Path message includes a sender Tspec object containing the bandwidth of the stream (Col 5, line 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin as applied to claims 1-3 above, and further in view of the Resource ReSerVation Protocol (RSVP) as set forth in Internet Engineering Task Force Request for Comment 2205 (hereinafter RFC 2205).

In considering claims 4 and 5, Martin discloses an RSVP host proxy which is capable of generating RSVP Path messages and receiving RSVP Resv messages on behalf of a server as stated above. However, Martin fails to disclose an RSVP host proxy which is capable of generating RSVP Path Teardown messages on behalf of a server. Nonetheless, the use of RSVP Path Teardown messages is well known, as referenced by RFC 2205.

Martin discloses that the RSVP host proxy supports the RSVP protocol set forth in RFC

2205 (Martin Col 3, lines 1-5). Section 2.4 of RFC 2205 discusses the use of RSVP Path

Teardown messages within the RSVP protocol. RFC 2205 goes on to recommend "that all end

hosts send a teardown request as soon as an application finishes" (Section 2.4, paragraph 1).

Thus, giving the teachings of RFC 2205, it would have been obvious to a person having ordinary

skill in the art to design the Martin system to support RSVP Path Teardown messages, since the

messages are recommended by the RSVP protocol.

5.   Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin as

applied to claims 1 and 6-7 in view of the Real-Time Streaming Protocol (RTSP) as set forth in

Internet Engineering Task Force Request for Comment 2326 (hereinafter RFC 2326).

In considering claim 8, as referenced above, Martin teaches the intermediate network

device of claim 7 wherein the packet classification engine is configured to snoop messages from

the stream in order to determine the network traffic characteristics and the bandwidth of the

stream. However, Martin does not disclose what protocol the snooped messages of the stream

use. A well-known streaming protocol is the Real-Time Streaming Protocol (RTSP), defined in

RFC 2326. RFC 2326 discloses that RTSP protocol only provides for stream control and that

stream delivery issues will rely on other protocols such as RSVP (RFC 2326, two paragraphs

above Appendix A). Thus, it would have been obvious to one of ordinary skill in the art to

design the Martin system to snoop RTSP stream messages, given that the RTSP protocol teaches

using the stream delivery protocol RSVP in conjunction with RTSP.

In considering claim 9, the intermediate network device of claim 8 wherein the packet

classification engine is configured to extract the bandwidth of the stream from one or more

messages whose contents are organized at least in part in accordance with the Session

Description Protocol (SDP). It is widely known that the Session Description Protocol (SDP) can

be used to describe RTSP streams as evidenced in the RTSP protocol (RFC 2326, Appendix C).

In considering claim 10, Martin discloses the intermediate network device of claim 9

further comprising a session manager configured to store the network traffic characteristics and

bandwidth of the stream (Col 4, lines 27-29).

In considering claim 11, the RTSP protocol discloses an RTSP state manager which includes one

or more state machine engines, configured to maintain the RTSP state of the stream (RFC 2326,

Appendix A.2).

6. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin as

applied to claims 1-2 above, and further in view of "Format of the RSVP DCLASS Object"

Request for Comment 2996 (hereinafter RFC 2996).

In considering claims 17-19, as discussed above Martin discloses the intermediate

network device of claim 2 further comprising a means for obtaining the stream bandwidth and a

means for including the obtained bandwidth within an RSVP Path message Tspec object.

However, Martin fails to disclose a means for obtaining a differentiated services codepoint

(DSCP) value that is based on the bandwidth of the stream. Martin also fails to disclose the

intermediate network device of claim 17 wherein the RSVP transmitter proxy is configured to

load the DSCP into the RSVP Path message generated and sent on behalf of the server. Martin

further fails to disclose the intermediate network device of claim 18 wherein the RSVP Path

message includes a DCLASS object containing the DSCP.

Nonetheless, the use of RSVP Path messages that contain differentiated services

codepoint (DSCP) values within DCLASS objects is well known as referenced in RFC 2996

(Abstract). As stated above the Martin system already detects the stream bandwidth and includes

the obtained stream bandwidth in RSVP path messages sent on behave of the server.

Additionally the Martin system includes policy servers to retain quality of service (QoS) rules

(Col 2, line 60). Such a policy server could retain quality of service rules to determine DSCP

values for a given stream. Therefore it would have been obvious to one of ordinary skill in the art

to design the Martin system to obtain a differentiated services codepoint (DSCP) value that is

based on the bandwidth of the stream, in order "to enhance the manageability of application

traffic QoS in a differentiated service network" (RFC 2996, Abstract). It would have also been

obvious to include within an RSVP path message, sent on behave half of the server, the

determined DSCP value in a DCLASS object, given that such usage is disclosed in the protocol

(RFC 2996, Abstract).

7. The prior art made of record, in PTO form 892, and not relied upon is considered pertinent to

applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sean Reilly whose telephone number is 703-308-8646. The

examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Glen Burgess can be reached on 703-305-4792. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 6, 2004

Bradley Edelman
Art Unit 253